

**TDMS No.** 88105 - 03

**Test Type:** CHRONIC

**Route:** GAVAGE

**Species/Strain:** RATS/F 344

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

ISOEUGENOL

**CAS Number:** 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

F1\_R2

**Date Report Reqstd:** 09/28/2006

**Time Report Reqstd:** 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

**Lab:** BNW

**C Number:** C88105

**Lock Date:** 01/21/2005

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** ALL

**Removal Date Range:** ALL

**Treatment Groups:** Include ALL

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## ALIMENTARY SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

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DAY ON TEST	7	6	6	7	7	7	7	7	6	7	7	5	7	7	7	7	4	7	7	7	7	6	7	6	
	2	7	8	3	3	3	2	3	3	1	3	2	5	3	2	0	3	0	3	2	3	3	7	3	3
	9	4	8	0	0	0	9	1	0	7	0	9	6	0	9	8	1	1	1	9	0	0	4	0	5
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>0 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
Bile Duct, Hyperplasia	1	1		1	1	2	1	1		1		3	1	1	2	2	1	1	1	2	1	1	1	3	
Centrilobular, Necrosis																									
Mesentery	+			+			+	+														+		+	+
Fat, Hemorrhage	3						2			2	2											2		2	2
Fat, Necrosis																									
Oral Mucosa																									
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basophilic Focus																									
Metaplasia, Hepatocyte																									
Acinus, Atrophy							2	1	2	1	2	1	2	1	2	2	2	2	2	3	1			3	
Acinus, Hyperplasia							2	2	2	2	4	2	2	3	2	2	2	3	2	2	3	1			
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia																									
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia, Squamous																									
Inflammation																									
Ulcer							2															3			
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Atrophy																									

**CARDIOVASCULAR SYSTEM**

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

## Lab: BNW

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

## **HEMATOPOIETIC SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M., Missing tissue

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Page 5

1-4 .. Lesion qualified as:

1) Minimal    3) Moderate  
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**Species/Strain:** RATS/F 344

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## Lab: BNW

## **RESPIRATORY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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x .. Lesion present

| .. Insufficient tissue

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Page 7

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

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**Pathologist:** Blackshear, P. - GRUMBEIN, S.

**Date Report Registered:** 09/28/2006

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Lab: BNW

## **ALIMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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DAY ON TEST	7	5	7	7	6	7	7	7	7	6	7	7	7	7	7	6	7	7	7	7	7	7	7	6	
	2	7	1	3	0	3	3	1	2	3	2	3	3	3	2	3	8	3	3	3	3	2	2	3	9
	9	7	5	1	7	0	1	5	9	0	4	0	0	0	9	1	1	0	1	1	0	9	9	1	6
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	
																								<b>* TOTALS</b>	
Bile Duct, Hyperplasia	1	1	2	2		1	2	1	1	2	3	2	2	2	2	2	1		2	2	2	2	2	<b>39 1.5</b>	
Centrilobular, Necrosis																								<b>2 2.0</b>	
Mesentery																								<b>+ 12</b>	
Fat, Hemorrhage																								<b>1 3.0</b>	
Fat, Necrosis																								<b>2 10.1</b>	
Oral Mucosa																								<b>+ 1</b>	
Pancreas																								<b>+ 50</b>	
Basophilic Focus																								<b>1 2.0</b>	
Metaplasia, Hepatocyte																								<b>1 1.0</b>	
Acinus, Atrophy																								<b>22 1.5</b>	
Acinus, Hyperplasia																								<b>21 2.5</b>	
Salivary Glands																								<b>+ 50</b>	
Hyperplasia																								<b>1 2.0</b>	
Stomach, Forestomach																								<b>+ 50</b>	
Hyperplasia, Squamous																								<b>2 2.5</b>	
Inflammation																								<b>1 2.0</b>	
Ulcer																								<b>3 2.3</b>	
Stomach, Glandular																								<b>+ 50</b>	
Atrophy																								<b>2 2.0</b>	

**CARDIOVASCULAR SYSTEM**

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	2	7	1	3	0	3	3	1	2	3	2	3	3	3	2	3	8	3	3	3	3	2	2	3	9
	9	7	5	1	7	0	1	5	9	0	4	0	0	0	9	1	1	0	1	1	0	9	9	1	6
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 MG/KG</b>	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	
																								<b>* TOTALS</b>	

Blood Vessel

2

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Cardiomyopathy	1	1	2	2	1	1	1	1	1	1	1	2	1	2	1	1	1	2	2	1	2	2	1	1	48
Thrombosis																								1.4	
																								1	
																								2.0	

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Degeneration, Cystic																								2	2.0		
Hyperplasia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	31	1.9		
Hypertrophy																								5	1.6		
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Hyperplasia	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	24	2.0		
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Hyperplasia																								1	2.0		
Parathyroid Gland	+	+	+	+	+	+	+	M	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	47			
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Pars Distalis, Angiectasis																								6	2.8		
Pars Distalis, Hyperplasia	2		2	3	2	2	1		3		2	2	2											3	3	18	2.4
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
C-cell, Hyperplasia	2		2	2	2	2	1		2		2	2	2											2	9	2.2	
Follicular Cell, Hyperplasia																								3	1.3		

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## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

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Lab: BNW

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
.....																					
Preputial Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
.....																					
Prostate Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Inflammation, Chronic Active	2		3		2		1		2		4		10		2.0		3		1.7		
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Testes Atrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Interstitial Cell, Hyperplasia	3		2		2		2		2		2		7		3.0		7		1.9		

## **HEMATOPOIETIC SYSTEM**

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DAY ON TEST	7	5	7	7	6	7	7	7	7	6	7	7	7	7	7	6	7	7	7	7	7	7	7	6			
	2	7	1	3	0	3	3	1	2	3	2	3	3	3	2	3	8	3	3	3	3	3	2	3	9		
	9	7	5	1	7	0	1	5	9	0	4	0	0	0	9	1	1	0	1	1	0	9	9	1	6		
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>0 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5			
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9			
	<b>* TOTALS</b>																										
Mediastinal, Ectasia	2																								1 2.0		
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	0	
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Fibrosis																										2 2.0	
Hematopoietic Cell Proliferation	3	2																								3 2.7	
Hemorrhage																										1 4.0	
Necrosis																										2 2.0	
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47	

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----	--

**NERVOUS SYSTEM**

*	.. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+	.. Tissue examined microscopically
x	.. Lesion present
I	.. Insufficient tissue

M .. Missing tissue  
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	2	7	1	3	0	3	3	1	2	3	2	3	3	3	2	3	8	3	3	3	3	3	2	3	9
	9	7	5	1	7	0	1	5	9	0	4	0	0	0	9	1	1	0	1	1	0	9	9	1	6
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	
	<b>* TOTALS</b>																								
Brain Hydrocephalus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
																									2 2.5

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Metaplasia, Squamous																									1 2.0
Alveolar Epithelium, Hyperplasia	1					3	1	1	1		4	1	1	1	2	1	1	1	1	1	1	1	1	1	27 1.6
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Foreign Body																									3
Inflammation, Suppurative	1	2	2	2																					12 1.3
Inflammation, Chronic																									2 1.0
Olfactory Epithelium, Accumulation, Hyaline Droplet	1	1	1	1	2	2	1	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	2	50 1.4
Olfactory Epithelium, Atrophy																									1 1.0
Olfactory Epithelium, Degeneration																									1 1.0
Olfactory Epithelium, Metaplasia, Respiratory	1					1																			4 1.0
Olfactory Epithelium, Metaplasia, Squamous																									1 1.0
Respiratory Epithelium, Accumulation, Hyaline Droplet											2														3 2.0
Respiratory Epithelium, Hyperplasia	1	1				2					2														12 1.6
Respiratory Epithelium, Metaplasia, Squamous																									1 1.0
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOI

**CAS Number:** 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

**Date Report Registered:** 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

	7	5	7	7	6	7	7	7	7	6	7	7	7	7	6	7	7	7	7	7	7	7	6	
DAY ON TEST	2	7	1	3	0	3	3	1	2	3	2	3	3	2	3	8	3	3	3	3	2	2	3	9
	9	7	5	1	7	0	1	5	9	0	4	0	0	9	1	1	0	1	1	0	9	9	1	6
<hr/>																								
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>0 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

## **SPECIAL SENSES SYSTEM**

## **URINARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 15

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

1) Minimal    3) Moderate  
2) Mild        4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

**Date Report Requested:** 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

## Lab: BNW

## **ALIMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 16

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

**CAS Number:** 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

Time Report Registered: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## CARDIOVASCULAR SYSTEM

Blood Vessel	+	.....																					
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cardiomyopathy	1	1	1	2		2	2	2	1	2	1	2	2	1	4	2	1	2	1	1	1	1	2

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOI

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

### Thrombosis

3 2

## **ENDOCRINE SYSTEM**

## **GENERAL BODY SYSTEM**

Tissue NOS +

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

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TDMS No. 88105 - 03

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ISOFUGENOL

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**Pathologist:** Blackshear, P. - GRUMBEIN, S

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**First Dose M/F:** 04/22/02 / 04/23/02

## Lab: BNW

## **GENITAL SYSTEM**

## Coagulating Gland

## Epididymis Granuloma Sperm

Preputial Gland  
Cyst  
Hyperplasia  
Inflammation, Chronic Active

Prostate  
Hyperplasia  
Inflammation, Chronic Active

Seminal Vesicle

Testes  
Atrophy  
Interstitial Cell, Hyperplasia

## **HEMATOPOIETIC SYSTEM**

## Bone Marrow

Lymph Node

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

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BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate



TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Requested: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## **NERVOUS SYSTEM**

## **RESPIRATORY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked



TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

DAY ON TEST	7	7	7	7	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	3	2	2	3	2	0	2	3	2	1	2	3	3	3	3	0	2	2	3	2	2	3	3	3	3	3	2	2	3
	0	9	9	0	2	1	9	0	9	0	9	1	1	0	1	5	9	9	0	7	9	0	0	0	0	0	0	9	0
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>75 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	males (cont...)			
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+		

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2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

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ISOFUGENOL

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**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

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**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## **ALIMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

#### **M. Missing tissue**

BLANK .. Not examined microscopically

Page 24

1-4 ... Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

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First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

DAY ON TEST	5	6	5	7	6	7	5	7	7	7	7	7	7	6	5	7	7	4	4	7	7	7	7	7		
	5	4	6	2	7	2	3	3	3	2	2	3	2	3	7	3	1	2	8	7	2	3	2	3	2	
	8	8	8	9	0	9	3	1	0	9	9	1	9	0	6	3	8	9	5	7	6	1	9	0	9	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>75 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0		
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9		
	<b>* TOTALS</b>																									
Mixed Cell Focus																									<b>4</b>	
Bile Duct, Hyperplasia	1	2	1	1	1	2		1	1	2	2	1	1	1	3		2	1		2	2	1	1	2	1	<b>39 1.5</b>
Centrilobular, Necrosis																									<b>1 3.0</b>	
Mesentery	+ 2							+ 2		+ 2		+ 3		+ 3		+ 2		<b>18 2.1</b>								
Fat, Necrosis																										
Pancreas	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	<b>50</b>		
Basophilic Focus																									<b>1 4.0</b>	
Acinus, Atrophy																									<b>21 1.3</b>	
Acinus, Hyperplasia		1 2							2 3	1 2	2			1 3	1 3		2			1		2			<b>12 2.6</b>	
Salivary Glands	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	<b>50</b>		
Stomach, Forestomach	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	<b>49</b>		
Hyperplasia, Squamous																									<b>1 1.0</b>	
Ulcer																									<b>1 2.0</b>	
Stomach, Glandular	A +	+ +	A +	+ +	+ +	+ +	+ 2	+ +	A +	+ +	+ +	+ +	<b>46</b>													
Atrophy																									<b>3 2.3</b>	
Necrosis																									<b>1 2.0</b>	

**CARDIOVASCULAR SYSTEM**

Blood Vessel																									<b>3</b>
Heart	+ 2	+ 1	+ 1	+ 2	+ 1	+ 1	+ 2	+ 1	+ 1	+ 1	+ 2	+ 2	+ 1	+ 1	+ 2	+ 2	+ 2	+ 1	+ 3	+ 1	+ 1	+ 2	+ 2	<b>50 44 1.6</b>	

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

	5	6	5	7	6	7	5	7	7	7	7	7	7	6	5	7	7	4	4	7	7	7	7	7	
	5	4	6	2	7	2	3	3	3	2	2	3	2	3	7	3	1	2	8	7	2	3	2	3	2
	8	8	8	9	0	9	3	1	0	9	9	1	9	0	6	3	8	9	5	7	6	1	9	0	9
DAY ON TEST																									
FISCHER 344 RATS MALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75 MG/KG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
																									* TOTALS

Thrombosis

2 2.5

## ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Hyperplasia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	22 2.0
Hypertrophy		2																						1 2.0
Vacuolization Cytoplasmic			2																					2 2.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Hyperplasia	2																							18 2.5
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	49
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	M	+	+	+	+	47
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	48
Pars Distalis, Hyperplasia	3	3		1		3		2	2	1		1	2	3		2								20 2.3
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	49
C-cell, Hyperplasia																								5 2.0
Follicular Cell, Hyperplasia	3					2								1										3 2.0

## GENERAL BODY SYSTEM

Tissue NOS																								1
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

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TDMS No. 88105 - 03

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Species/Strain: RATS/F 344

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ISOEUGENOL

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Lab: BNW

DAY ON TEST	5	6	5	7	6	7	5	7	7	7	7	7	7	6	5	7	7	4	4	7	7	7	7	7	
	5	4	6	2	7	2	3	3	3	2	2	3	2	3	7	3	1	2	8	7	2	3	2	3	2
	8	8	8	9	0	9	3	1	0	9	9	1	9	0	6	3	8	9	5	7	6	1	9	0	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>75 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
	<b>* TOTALS</b>																								

**GENITAL SYSTEM**

Coagulating Gland	+	+																								2
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Granuloma Sperm																										1 1.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Cyst																										1
Hyperplasia																										2 3.0
Inflammation, Chronic Active																										1 4.0
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Hyperplasia																										9 2.2
Inflammation, Chronic Active																										1 2.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Atrophy																										4 3.0
Interstitial Cell, Hyperplasia																										2 2.5

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	49
Lymph Node	+		+		+		+		+		+		+		+		+		+			4			

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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TDMS No. 88105 - 03

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ISOEUGENOL

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	5	6	5	7	6	7	5	7	7	7	7	7	7	6	5	7	7	4	4	7	7	7	7	7	
	5	4	6	2	7	2	3	3	3	2	2	3	2	3	7	3	1	2	8	7	2	3	2	3	2
	8	8	8	9	0	9	3	1	0	9	9	1	9	0	6	3	8	9	5	7	6	1	9	0	9
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>75 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
																									<b>* TOTALS</b>

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Thrombosis																									<b>1 2.0</b>
Peripheral Nerve																									<b>1</b>
Spinal Cord																									<b>1</b>

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Inflammation, Chronic Active																									<b>1 3.0</b>
Metaplasia, Squamous																									<b>2 3.0</b>
Thrombosis																									<b>1 3.0</b>
Alveolar Epithelium, Hyperplasia																									<b>20 1.6</b>
Bronchiole, Hyperplasia																									<b>1 2.0</b>
Perivascular, Inflammation, Chronic Active																									<b>1 4.0</b>
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48	
Inflammation, Suppurative																									<b>11 1.3</b>
Inflammation, Chronic																									<b>1 2.0</b>
Glands, Dilatation																									<b>2 1.5</b>
Olfactory Epithelium, Accumulation, Hyaline Droplet	1	1	2		1	1	1	1	2	1	2	1	1	3	1	1									<b>37 1.2</b>
Olfactory Epithelium, Atrophy																									<b>5 1.2</b>
Olfactory Epithelium, Metaplasia, Respiratory																									<b>6 1.3</b>

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

DAY ON TEST	5	6	5	7	6	7	5	7	7	7	7	7	7	6	5	7	7	4	4	7	7	7	7	7	
	5	4	6	2	7	2	3	3	3	2	2	3	2	3	7	3	1	2	8	7	2	3	2	3	2
	8	8	8	9	0	9	3	1	0	9	9	1	9	0	6	3	8	9	5	7	6	1	9	0	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>75 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

**\* TOTALS**

Olfactory Epithelium, Metaplasia, Squamous																							2	1	2.0
Respiratory Epithelium, Accumulation, Hyaline Droplet																							2	5	1.6
Respiratory Epithelium, Hyperplasia																							2	3	1.7
Respiratory Epithelium, Metaplasia, Squamous																							2	4	2.0
Trachea Epithelium, Necrosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	49
																							1	3.0	

**SPECIAL SENSES SYSTEM**

Eye	A	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	A	+	+	+	46
Cataract																							4	1	4.0
Retina, Atrophy																							4	1	4.0
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	A	+	+	+	47
Hyperplasia																							2	5	2.4
Zymbal's Gland																								1	

**URINARY SYSTEM**

Kidney	A	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	A	+	+	+	48
Nephropathy	1	2	2	1	1	2	2	2	2	3	2	2	2	1	1	1	3	2	1	1	1	1	1	2	46
Transitional Epithelium, Hyperplasia																								1.4	

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DAY ON TEST	5	6	5	7	6	7	5	7	7	7	7	7	7	6	5	7	7	4	4	7	7	7	7	7	
	5	4	6	2	7	2	3	3	3	2	2	3	2	3	7	3	1	2	8	7	2	3	2	3	2
	8	8	8	9	0	9	3	1	0	9	9	1	9	0	6	3	8	9	5	7	6	1	9	0	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>75 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
	<b>* TOTALS</b>																								
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	48

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TDMS No. 88105 - 03

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## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

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## ALIMENTARY SYSTEM

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x .. Lesion present

| .. Insufficient tissue

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Page 32

1-4 .. Lesion qualified as:

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2) Mild      4) Marked



TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Requested: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

# **ENDOCRINE SYSTEM**

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

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| .. Insufficient tissue

M .. Missing tissue

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

1) Minimal    3) Moderate  
2) Mild        4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

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DAY ON TEST	7	7	7	7	7	5	7	7	1	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	2	2	0	2	1	4	2	3	2	0	3	3	2	2	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3		
	9	9	8	9	9	9	9	1	0	5	0	0	9	9	1	0	1	9	0	1	0	1	0	0	0	0	0	0	0		
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>150 MG/KG</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5						
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Preputial Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Prostate Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Testes Atrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Interstitial Cell, Hyperplasia	3																														

**HEMATOPOIETIC SYSTEM**

Bone Marrow Hyperplasia, Reticulum Cell	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Lymph Node Deep Cervical, Hyperplasia, Lymphoid Pancreatic, Inflammation, Chronic Active																															
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M		
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

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First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

DAY ON TEST	7	7	7	7	7	5	7	7	1	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	2	2	0	2	1	4	2	3	2	0	3	3	2	2	3	3	3	2	3	3	3	3	3	3	3	3	3
	9	9	8	9	9	9	9	1	0	5	0	0	9	9	1	0	1	9	0	1	0	0	0	0	0	0	0
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>150 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	males (cont...)	

Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrosis																										
Hematopoietic Cell Proliferation																										
Necrosis																										4
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Meninges, Hemorrhage																										3
Peripheral Nerve																										
Spinal Cord																										
Hemorrhage																										

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	2	2	0	2	1	4	2	3	2	0	3	3	2	2	3	3	3	2	3	3	3	2	3	3	3	3	3	3	3	3
	9	9	8	9	9	9	9	1	0	5	0	0	9	9	1	0	1	9	0	1	0	1	9	0	1	0	0	0	0	0
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>150 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	males (cont...)				

## RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Foreign Body																		X																			
Inflammation, Chronic Active																																					
Alveolar Epithelium, Hyperplasia	1																																				
Bronchiole, Hyperplasia																																					
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Foreign Body		X	X															X																			
Inflammation, Suppurative		2		2	2													1																			
Inflammation, Chronic	2																																				
Thrombosis																																					
Glands, Dilatation																																					
Nasolacrimal Duct, Cyst																			X																		
Olfactory Epithelium, Accumulation, Hyaline Droplet	1	1		2	1	2	1		1	1	1	1	2	1	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1						
Olfactory Epithelium, Atrophy									1		1																										
Olfactory Epithelium, Degeneration	1																																				
Olfactory Epithelium, Hyperplasia, Basal Cell																																					
Olfactory Epithelium, Metaplasia, Respiratory		2							2		1																							2			
Respiratory Epithelium, Accumulation, Hyaline Droplet	1																																				
Respiratory Epithelium, Hyperplasia	2	2		2	2	2												2																			
Respiratory Epithelium, Metaplasia, Squamous	1	1																																		2	

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TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

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CAS Number: 97-54-1

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## Lab: BNW

## SPECIAL SENSES SYSTEM

## **URINARY SYSTEM**

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Page 38

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TDMS No. 88105 - 03

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## **ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Intestine Large, Colon Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
	X																	X			2	
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Intestine Small, Jejunum Inflammation, Chronic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
																		4			1 4.0	
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Basophilic Focus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	26	
Clear Cell Focus	X	X	X																		19	
Degeneration, Cystic																					2 2.0	
Fatty Change																					2 3.0	
Hepatodiaphragmatic Nodule							X														3	
Mixed Cell Focus							X														3	
Bile Duct, Hyperplasia	1	2	1					1	2	1	1	1						1	3	X	1 2 2 1	32 1.4

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 39

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## CARDIOVASCULAR SYSTEM

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TDMS No. 88105 - 03

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Lab: BNW

	7	7	7	7	4	4	6	7	3	7	6	7	7	7	6	7	2	2	7	5	6	7	7	7	7
DAY ON TEST	3	3	3	3	1	8	2	0	6	3	2	3	3	2	0	1	4	8	2	4	0	3	2	2	2
	0	0	0	0	1	5	4	8	0	0	4	0	0	9	3	6	6	5	9	8	7	1	9	9	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>150 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
	<b>* TOTALS</b>																								

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Hyperplasia	2	2	2	2						2	2															21		
Hypertrophy					2	2																				4		
																											1.8	
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Hyperplasia					2					3																16		
											2															2.4		
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
Hyperplasia					2																						1	
																											2.0	
Parathyroid Gland	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	45			
Pituitary Gland	+	M	M	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	47			
Pars Distalis, Angiectasis					1		3																				3	
Pars Distalis, Hyperplasia																												2.7
																												15
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50			
C-cell, Hyperplasia					2					2																	7	
																												2.3

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

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DAY ON TEST	7	7	7	7	4	4	6	7	3	7	6	7	7	7	6	7	2	2	7	5	6	7	7	7	7
	3	3	3	3	1	8	2	0	6	3	2	3	3	2	0	1	4	8	2	4	0	3	2	2	2
	0	0	0	0	0	1	5	4	8	0	0	4	0	0	9	3	6	6	5	9	8	7	1	9	9
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>150 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
	<b>* TOTALS</b>																								
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Preputial Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
																									1 2.0
Prostate Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
	1	4	4																						15 2.8
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Testes Atrophy	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Interstitial Cell, Hyperplasia																									3 2.7
																									4 1.5

**HEMATOPOIETIC SYSTEM**

Bone Marrow Hyperplasia, Reticulum Cell	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
																									1 3.0
Lymph Node Deep Cervical, Hyperplasia, Lymphoid Pancreatic, Inflammation, Chronic Active																									4
																									1 1.0
																									1 4.0
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	0
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

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DAY ON TEST	7	7	7	7	4	4	6	7	3	7	6	7	7	7	6	7	2	2	7	5	6	7	7	7	7	
	3	3	3	3	1	8	2	0	6	3	2	3	3	2	0	1	4	8	2	4	0	3	2	2	2	
	0	0	0	0	0	1	5	4	8	0	0	4	0	0	9	3	6	6	5	9	8	7	1	9	9	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>150 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	
	<b>* TOTALS</b>																									
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Fibrosis																										2.25
Hematopoietic Cell Proliferation																										1.30
Necrosis																										1.40
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Meninges, Hemorrhage																									1.30
Peripheral Nerve																									1
Spinal Cord																									1
Hemorrhage																									1.30

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	7	7	7	7	4	4	6	7	3	7	6	7	7	7	6	7	2	2	7	5	6	7	7	7	7
	3	3	3	3	1	8	2	0	6	3	2	3	3	2	0	1	4	8	2	4	0	3	2	2	2
	0	0	0	0	1	5	4	8	0	0	4	0	0	9	3	6	6	5	9	8	7	1	9	9	9
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>150 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
																									<b>* TOTALS</b>

**RESPIRATORY SYSTEM**

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Foreign Body																									3	
Inflammation, Chronic Active																									1 2.0	
Alveolar Epithelium, Hyperplasia	1	1		2	1																			2 2	16 1.7	
Bronchiole, Hyperplasia						1																			1 1.0	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Foreign Body																									3	
Inflammation, Suppurative							2			1				1										13 1.4		
Inflammation, Chronic																									2 1.5	
Thrombosis																									1 3.0	
Glands, Dilatation																									1 2.0	
Nasolacrimal Duct, Cyst																									1	
Olfactory Epithelium, Accumulation, Hyaline Droplet	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	42 1.2
Olfactory Epithelium, Atrophy											1	1	1	1	1										9 1.0	
Olfactory Epithelium, Degeneration																									2 1.0	
Olfactory Epithelium, Hyperplasia, Basal Cell														1											1 1.0	
Olfactory Epithelium, Metaplasia, Respiratory					2		1	2	1															10 1.7		
Respiratory Epithelium, Accumulation, Hyaline Droplet																									1 1.0	
Respiratory Epithelium, Hyperplasia	1					2																			14 1.6	
Respiratory Epithelium, Metaplasia, Squamous																									3 1.3	

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TDMS No. 88105 - 03

Test Type: CHRONIC

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Species/Strain: RATS/F 344

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	7	7	7	7	4	4	6	7	3	7	6	7	7	7	6	7	2	2	7	5	6	7	7	7	7
	3	3	3	3	1	8	2	0	6	3	2	3	3	2	0	1	4	8	2	4	0	3	2	2	2
	0	0	0	0	1	5	4	8	0	0	4	0	0	9	3	6	6	5	9	8	7	1	9	9	9
	.....																								
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
																									<b>* TOTALS</b>
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Retina, Atrophy																									<b>1 3.0</b>
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Hyperplasia																									<b>5 1.6</b>

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Nephropathy	2	1	2	3	1	1	2	1	2	3	2	2	1	2	2	2	1	1	1	1	1	2	3	1	<b>47 1.6</b>
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50

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+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

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Lab: BNW

## ALIMENTARY SYSTEM

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+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M., Missing tissue

#### **M. Missing tissue**

BLANK .. Not examined microscopically

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1) Minimal 3) Moderate

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DAY ON TEST	7	7	7	7	7	7	6	5	7	7	7	7	7	7	6	7	7	7	7	4	5	7	7	6	7		
	3	3	3	2	2	3	7	1	2	3	2	3	2	2	3	2	2	2	3	0	8	4	3	2	9	3	
	0	1	1	9	9	0	6	6	9	0	9	9	0	9	9	0	9	9	1	1	5	3	1	9	6	0	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>300 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	males (cont...)	
Bile Duct, Hyperplasia	1	1	1	1	1	1																				2	1
Centrilobular, Necrosis																											
Hepatocyte, Vacuolization Cytoplasmic							1																				
Mesentery								+	+																		
Fat, Necrosis								2	2																		
Oral Mucosa																			+								
Pancreas																											
Acinus, Atrophy																											
Acinus, Hyperplasia								1	1											1	1						
Salivary Glands																											
Stomach, Forestomach																											
Hyperplasia, Squamous																											
Ulcer																			1								
Stomach, Glandular																											
Atrophy																											
Mineralization																			1								

**CARDIOVASCULAR SYSTEM**

Blood Vessel

Heart

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

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	7	7	7	7	7	7	6	5	7	7	7	7	7	7	6	7	7	7	7	4	5	7	7	6	7	
DAY ON TEST	3	3	3	2	2	3	7	1	2	3	2	3	2	2	3	2	2	2	3	0	8	4	3	2	9	3
	0	1	1	9	9	0	6	6	9	0	9	0	9	9	0	9	9	1	1	5	3	1	9	6	0	

  

<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>300 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5

**males  
(cont...)**

Cardiomyopathy	1	1	2	2	2	2	1	1	1	2	3	2	2	2	2	2	2	1	1	2	2	2	2	2
Pericardium, Inflammation, Acute																								

**ENDOCRINE SYSTEM**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Hypertrophy																								
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid Gland	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+
Pituitary Gland	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemorrhage								2																
Pars Distalis, Angiectasis																								
Pars Distalis, Hyperplasia																								
Thyroid Gland	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, Hyperplasia	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Follicular Cell, Hyperplasia																								

**GENERAL BODY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## **GENITAL SYSTEM**

## HEMATOPOIETIC SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

.. Total animals with tissue examined

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

M .. Missing tissue  
A .. Autolysis precludes evaluation

BLANK - Not examined microscopically

1-4 .. Lesion qualified as:

1-4 :: Lesion qualified as:

1) Minimal    3) Moderate  
2) Mild        4) Marked



TDMS No. 88105 - 03

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Route: GAVAGE

Species/Strain: RATS/F 344

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Lab: BNW

DAY ON TEST	7	7	7	7	7	7	6	5	7	7	7	7	7	7	6	7	7	7	7	4	5	7	7	6	7	
	3	3	3	2	2	3	7	1	2	3	2	3	2	2	3	2	2	3	2	3	8	4	3	2	9	3
	0	1	1	9	9	0	6	6	9	0	9	9	0	9	9	0	9	9	1	1	5	3	1	9	6	0
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>300 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Foreign Body																										
Alveolar Epithelium, Hyperplasia	3	4	2	2	1																					
Alveolus, Infiltration Cellular, Histiocyte																										
Bronchiole, Hyperplasia																										
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Foreign Body																										
Inflammation, Suppurative	2																									
Inflammation, Chronic		1																								
Glands, Dilatation																										
Nasolacrimal Duct, Inflammation																										
Olfactory Epithelium, Accumulation, Hyaline Droplet	2	1	2	2	1	1	1	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1
Olfactory Epithelium, Atrophy																										
Olfactory Epithelium, Degeneration	2																									
Olfactory Epithelium, Hyperplasia	2																									
Olfactory Epithelium, Metaplasia, Respiratory																										
Respiratory Epithelium, Accumulation, Hyaline Droplet																										
Respiratory Epithelium, Hyperplasia																										
Respiratory Epithelium, Metaplasia, Squamous	1																									
Pleura																										
Inflammation, Acute																										
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

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First Dose M/F: 04/22/02 / 04/23/02

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	7	7	7	7	7	7	6	5	7	7	7	7	7	7	6	7	7	7	7	4	5	7	7	6	7	
DAY ON TEST	3	3	3	2	2	3	7	1	2	3	2	3	2	2	3	2	2	2	3	0	8	4	3	2	9	3
	0	1	1	9	9	0	6	6	9	0	9	9	0	9	9	0	9	9	1	1	5	3	1	9	6	0
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>300 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	

males  
(cont...)**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	A	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	
Cataract	3															3										
Retina, Atrophy	3															3										

Harderian Gland	+	+	+	+	+	+	+	A	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	
Hyperplasia																										

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+
Cyst																									
Degeneration, Mucoid, Focal																									
Hyperplasia, Oncocytic																									
Inflammation, Suppurative																									
Nephropathy	3	3	2	2	3	3	3	1	2	2	2	3	2			3	3	2	2	2	1	2	2	2	1
Renal Tubule, Degeneration, Hyaline																									
Transitional Epithelium, Hyperplasia																									
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

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TDMS No. 88105 - 03

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	7	6	7	7	7	7	7	6	7	7	4	7	7	4	7	7	6	5	5	6	4	6	5	7	
	3	0	3	2	3	2	2	3	3	1	2	8	2	3	4	1	3	2	9	0	7	1	9	4	3
	0	7	0	9	1	9	9	1	9	9	5	9	0	3	9	0	8	3	2	4	5	2	8	0	
<hr/>																									
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>300 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
	<b>* TOTALS</b>																								

**ALIMENTARY SYSTEM**

Esophagus Perforation	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	2 3.5	
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	A	+	+	+	+	45	
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	47	
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48	
Intestine Small, Duodenum Inflammation, Acute	+	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	A	+	+	+	+	45	
																								1 1.0	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	A	+	+	+	+	45	
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	A	+	+	+	+	45	
Liver	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	A	+	+	+	+	48	
Angiectasis																								2 2.5	
Basophilic Focus	X			X	X			X		X	X													18	
Clear Cell Focus				X	X	X	X																	14	
Degeneration, Cystic																									4 1.3
Eosinophilic Focus																									2
Fatty Change																									2 3.0
Hepatodiaphragmatic Nodule																									3
Infarct																									1 2.0
Mixed Cell Focus																									2

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## CARDIOVASCULAR SYSTEM

Blood Vessel	+	1
Heart	+	50

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Page 54

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1) Minimal 3) Moderate

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Lab: BNW

## **ENDOCRINE SYSTEM**

## **GENERAL BODY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M., Missing tissue

#### **A .. Autolysis precludes evaluation**

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Page 55

#### 1-4 .. Lesion qualified as:

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DAY ON TEST	7	6	7	7	7	7	7	6	7	7	4	7	7	4	7	7	6	5	5	6	4	6	5	7	
	3	0	3	2	3	2	2	3	3	1	2	8	2	3	4	1	3	2	9	0	7	1	9	4	3
	0	7	0	9	1	9	9	1	9	9	5	9	0	3	9	0	8	3	2	4	5	2	8	0	
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>300 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	0	
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	
	<b>* TOTALS</b>																								

**GENITAL SYSTEM**

Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Preputial Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
																								4 1.8
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Hyperplasia	2																							11 2.2
Inflammation, Chronic Active																								3 2.7
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	49
Hyperplasia																								1 3.0
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Interstitial Cell, Hyperplasia																								1 1.0

**HEMATOPOIETIC SYSTEM**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Lymph Node																								4
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	0
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	A	+	+	+	+	+	47

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TDMS No. 88105 - 03

Test Type: CHRONIC

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Species/Strain: RATS/F 344

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	7	6	7	7	7	7	7	6	7	7	4	7	7	4	7	7	6	5	5	6	4	6	5	7	
	3	0	3	2	3	2	2	3	3	1	2	8	2	3	4	1	3	2	9	0	7	1	9	4	3
	0	7	0	9	1	9	9	1	9	9	5	9	0	3	9	0	8	3	2	4	5	2	8	0	

---

<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9

---

**\* TOTALS**

Spleen	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	A	+	+	+	+	+	47	
Hematopoietic Cell Proliferation																								2 3.0

Thymus	+	+	+	+	+	+	+	+	+	+	A	+	+	M	+	+	+	+	+	+	+	+	48
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

**INTEGUMENTARY SYSTEM**

Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Skin Cyst Epithelial Inclusion	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X	+	+	+	+	50
																		X	+	+	+	2	

**MUSCULOSKELETAL SYSTEM**

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
Skeletal Muscle																							1

**NERVOUS SYSTEM**

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

**RESPIRATORY SYSTEM**

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Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

ANIMAL ID 300 MG/KG	DAY ON TEST	7	6	7	7	7	7	7	6	7	7	4	7	7	4	7	7	6	5	5	6	4	6	5	7	
		3	0	3	2	3	2	2	3	3	1	2	8	2	3	4	1	3	2	9	0	7	1	9	4	3
		0	7	0	9	1	9	9	1	9	9	5	9	0	3	9	0	8	3	2	4	5	2	8	0	
FISCHER 344 RATS MALE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
		7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	0	
		6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	
		* TOTALS																								
Lung		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Foreign Body																			X							1
Alveolar Epithelium, Hyperplasia		1	1		1	1	2	1		1		1							4							25
Alveolus, Infiltration Cellular, Histiocyte																				2	2	1	1	4		1.7
Bronchiole, Hyperplasia																										1.0
Nose		+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	49	
Foreign Body			X																X							4
Inflammation, Suppurative		2				1	2												1							12
Inflammation, Chronic			2																2							2.0
Glands, Dilatation							2												2							2.0
Nasolacrimal Duct, Inflammation																										1.20
Olfactory Epithelium, Accumulation, Hyaline Droplet		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	42	
Olfactory Epithelium, Atrophy						1	1											1	1						1.0	
Olfactory Epithelium, Degeneration							1											1							6	
Olfactory Epithelium, Hyperplasia																										1.20
Olfactory Epithelium, Metaplasia, Respiratory		2	2			2	2			1									1						15	
Respiratory Epithelium, Accumulation, Hyaline Droplet																										1.90
Respiratory Epithelium, Hyperplasia		2	2					1											2	2						8
Respiratory Epithelium, Metaplasia, Squamous		3	2					2											2							5
Pleura																		+								2
Inflammation, Acute																		4								2.40
Trachea		+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	48	

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+ .. Tissue examined microscopically

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l .. Insufficient tissue

M .. Missing tissue

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BLANK .. Not examined microscopically

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1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

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First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

	7	6	7	7	7	7	7	6	7	7	4	7	7	4	7	7	6	5	5	6	4	6	5	7	
	3	0	3	2	3	2	2	3	3	1	2	8	2	3	4	1	3	2	9	0	7	1	9	4	3
	0	7	0	9	1	9	9	1	9	9	5	9	0	3	9	0	8	3	2	4	5	2	8	0	
<hr/>																									
<b>FISCHER 344 RATS MALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>300 MG/KG</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	0
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
	<b>* TOTALS</b>																								

**SPECIAL SENSES SYSTEM**

Eye	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	A	+	+	+	+	+	45	
Cataract	2	3.0																							
Retina, Atrophy	2	3.0																							
Harderian Gland	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	A	+	+	+	+	+	45	
Hyperplasia	2																								1 2.0

**URINARY SYSTEM**

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Cyst																									1 3.0
Degeneration, Mucoid, Focal																									1 3.0
Hyperplasia, Oncocytic																									1 1.0
Inflammation, Suppurative																									1 2.0
Nephropathy	2	1	3	2	3	2	2	2	3	3	2	3	2	2	3	1	2	1	1	2	1	1	1	2	47 2.1
Renal Tubule, Degeneration, Hyaline																									1 4.0
Transitional Epithelium, Hyperplasia																									2 2.5
Urinary Bladder	+	+	+	+	+	+	+	+	A	+	A	+	+	+	+	+	+	A	+	+	+	+	+	47	

\*\*\* END OF MALE DATA \*\*\*

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

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I .. Insufficient tissue

M .. Missing tissue

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1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

**Date Report Requested:** 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## ALIMENTARY SYSTEM

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1) Minimal 3) Moderate  
2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

## Lab: BNW

## CARDIOVASCULAR SYSTEM

# **ENDOCRINE SYSTEM**

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

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First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

DAY ON TEST	6	5	6	7	4	7	7	7	6	6	6	7	7	7	7	7	7	7	6	6	7	7	7	5		
	8	5	1	1	0	2	3	3	3	1	4	2	3	3	3	3	3	3	3	8	0	3	3	8		
	5	9	7	3	0	3	2	0	2	7	5	7	1	1	1	1	2	1	0	7	0	7	2	2		
<b>FISCHER 344 RATS FEMALE</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>0 MG/KG</b>	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4		
Clitoral Gland Hyperplasia	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+		
																			3						1	
Ovary Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
																				2						
Uterus Necrosis Endometrium, Hyperplasia, Cystic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
																				3						3
Vagina																			+							

**HEMATOPOIETIC SYSTEM**

Bone Marrow Hyperplasia, Reticulum Cell	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Thymus	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+

**INTEGUMENTARY SYSTEM**

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

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First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

DAY ON TEST	6	5	6	7	4	7	7	7	6	6	6	7	7	7	7	7	7	6	6	7	7	7	5
	8	5	1	1	0	2	3	3	3	1	4	2	3	3	3	3	3	3	8	0	3	3	8
	5	9	7	3	0	3	2	0	2	7	5	7	1	1	1	1	2	1	0	7	0	7	2

  

FISCHER 344 RATS FEMALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0 MG/KG	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3

females  
(cont...)

Transitional Epithelium, Hyperplasia

4

Urinary Bladder

+ +

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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x .. Lesion present

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TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

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## **ALIMENTARY SYSTEM**

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Page 67

1-4 .. Lesion qualified as:

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

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ISOEUGENOL

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Date Report Reqstd: 09/28/2006

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First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 |          |        |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--------|
|                                | 3 | 3 | 3 | 3 | 5 | 3 | 3 | 7 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3        |        |
|                                | 1 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 1 | 1 | 2 | 2 | 7 | 2 | 1 | 0 | 2 | 1 | 0 | 1 | 1 | 2 | 0        |        |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |        |
| ANIMAL ID                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |        |
| <b>0 MG/KG</b>                 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        |        |
|                                | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5        |        |
|                                | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8        |        |
|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | * TOTALS |        |
| Mesentery                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 11     |
| Fat, Hemorrhage                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1 2.0  |
| Fat, Necrosis                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 11 2.0 |
| Pancreas                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 50     |
| Basophilic Focus               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1 2.0  |
| Acinus, Atrophy                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 9 1.1  |
| Acinus, Hyperplasia            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 5 2.0  |
| Salivary Glands                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 49     |
| Stomach, Forestomach           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 50     |
| Hyperplasia, Squamous          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 2 1.0  |
| Inflammation                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1 2.0  |
| Ulcer                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1 3.0  |
| Stomach, Glandular             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 50     |
| Atrophy                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 1 1.0  |
| Mineralization                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          | 3 1.0  |

**CARDIOVASCULAR SYSTEM**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|----|
| Blood Vessel   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 2  |
| Heart          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 50 |
| Cardiomyopathy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 41 1.1 |    |
|                | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1      |    |

**ENDOCRINE SYSTEM**

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 |                 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
|                                | 3 | 3 | 3 | 3 | 5 | 3 | 3 | 7 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3               |
|                                | 1 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 1 | 1 | 2 | 2 | 7 | 2 | 1 | 0 | 2 | 1 | 0 | 1 | 1 | 2 | 0               |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |
| <b>ANIMAL ID</b>               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |
| <b>0 MG/KG</b>                 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2               |
|                                | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5               |
|                                | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8               |
|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |               |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---------------|
| Adrenal Cortex               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |               |
| Hyperplasia                  | 2 | 2 | 2 | 2 | 2 |   |   |   | 2 | 2 | 2 |   |   |   |   |   |   |   |   |   |   |   |    | <b>25 2.0</b> |
| Hypertrophy                  |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>4 1.8</b>  |
| Necrosis                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>1 3.0</b>  |
| Adrenal Medulla              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |               |
| Hyperplasia                  |   |   |   |   |   |   |   |   |   | 2 |   |   | 2 |   |   |   |   |   |   |   |   |   |    | <b>5 2.4</b>  |
| Islets, Pancreatic           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |               |
| Parathyroid Gland            | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 47 |               |
| Hyperplasia                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>1 2.0</b>  |
| Pituitary Gland              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |               |
| Cyst                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>1 2.0</b>  |
| Pars Distalis, Angiectasis   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>3 2.0</b>  |
| Pars Distalis, Hyperplasia   | 3 | 3 |   |   | 3 | 4 |   |   |   | 3 |   |   | 3 |   |   | 2 |   | 2 | 2 | 3 |   |   |    | <b>17 2.6</b> |
| Thyroid Gland                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |               |
| C-cell, Hyperplasia          | 2 | 2 |   |   |   |   |   |   | 2 | 2 |   |   |   |   |   | 3 |   |   |   |   |   |   |    | <b>9 2.6</b>  |
| Follicular Cell, Hyperplasia |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |    | <b>2 1.5</b>  |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                                      | 7               | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7  |       |
|--|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
|  | 3               | 3 | 3 | 3 | 5 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4  | 3     |
|  | 1               | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 1 | 1 | 2 | 2 | 7 | 2 | 1 | 0 | 2 | 1 | 0 | 1 | 1 | 2 | 0  | 7     |
| <b>FISCHER 344 RATS FEMALE</b>                   | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0     |
| ANIMAL ID  | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0     |
| <b>0 MG/KG</b>                                   | 2               | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2  | 2     |
|  | 2               | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4  | 5     |
|  | 6               | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8  | 9     |
|  | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
| Clitoral Gland Hyperplasia                       | +               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 48 |       |
|  |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 7 1.7 |
| Ovary Cyst                                       | +               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50    |
|  |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 2.0 |
| Uterus Necrosis Endometrium, Hyperplasia, Cystic | +               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +  | 50    |
|  |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 3.0 |
|  |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2 2.5 |
| Vagina   |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1     |

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Bone Marrow Hyperplasia, Reticulum Cell | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50    |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 4.0 |
| Lymph Node, Mandibular                  | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0     |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
| Lymph Node, Mesenteric                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50    |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
| Spleen                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50    |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |
| Thymus                                  | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | M | 47    |

**INTEGUMENTARY SYSTEM**

|  |                                       |                             |
|--|---------------------------------------|-----------------------------|
| * .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade | M .. Missing tissue                   | 1-4 .. Lesion qualified as: |
| + .. Tissue examined microscopically   | A .. Autolysis precludes evaluation   | 1) Minimal    3) Moderate   |
| x .. Lesion present  | BLANK .. Not examined microscopically | 2) Mild    4) Marked        |
| I .. Insufficient tissue   | Page 70                               |                             |

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

**Date Report Registered:** 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## Mammary Gland Hyperplasia

## MUSCULOSKELETAL SYSTEM

## **NERVOUS SYSTEM**

## **RESPIRATORY SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Lung                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50     |
| Inflammation, Acute              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 2.0  |
| Inflammation, Chronic Active     |   |   |   |   |   | 1 |   |   |   | 1 |   |   |   |   |   |   |   |   |   | 2 1.0  |
| Alveolar Epithelium, Hyperplasia |   | 2 | 1 |   | 1 | 1 |   |   |   | 1 | 1 | 1 |   |   |   |   |   |   |   | 17 1.2 |
| Bronchiole, Hyperplasia          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 | 1 | 1 1.0  |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 71

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## SPECIAL SENSES SYSTEM

## **URINARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 72

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOI

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

**Date Report Requested:** 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 |   |   |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 3 | 3 | 3 | 3 | 5 | 3 | 3 | 7 | 3 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 |   |
|                                | 1 | 1 | 2 | 2 | 1 | 0 | 2 | 3 | 1 | 1 | 2 | 2 | 7 | 2 | 1 | 0 | 2 | 1 | 0 | 1 | 1 | 2 | 0 | 7 | 1 |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>ANIMAL ID</b>               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>0 MG/KG</b>                 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|                                | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
|                                | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

## Transitional Epithelium, Hyperplasia

1 4.0

## Urinary Bladder

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

#### 1-4 .. Lesion qualified as

1) Minimal    3) Moderate  
2) Mild        4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## **ALIMENTARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 74

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

1) Minimal    3) Moderate  
2) Mild        4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 7 | 0 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 3 | 6 | 5 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 7 | 7 | 7 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 3 | 3 | 8 | 7 | 3 | 3 | 6 | 3 | 3 | 7 | 6 | 1 | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 3 | 3 | 3 |
|                                | 2 | 0 | 8 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 5 | 4 | 2 | 2 | 2 | 1 | 2 | 1 | 4 | 9 | 1 |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>75 MG/KG</b>                | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|                                | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 |
|                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 |
|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mesentery                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Fat, Necrosis                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Oral Mucosa                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas                       | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + |
| Acinus, Atrophy                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Acinus, Hyperplasia            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salivary Glands                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stomach, Forestomach           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Stomach, Glandular             | + | + | A | A | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + |
| Atrophy                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mineralization                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Tooth                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**CARDIOVASCULAR SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Pericardium, Inflammation, Acute |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal    3) Moderate

2) Mild        4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

Time Report Registered: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

## Lab: BNW

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M.. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

.. Lesion qualified as:

1) Minimal      3) Moderate  
2) Mild          4) Marked







TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## ALIMENTARY SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 80

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## CARDIOVASCULAR SYSTEM

# **ENDOCRINE SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 81

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 3 | 6 | 7 | 7 | 7 | 7 | 7 | 7  |          |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----------|
|                                | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 8 | 9 | 3 | 3 | 3 | 3 | 0  | 3        |
|                                | 0 | 0 | 2 | 1 | 6 | 1 | 1 | 9 | 1 | 2 | 2 | 0 | 2 | 2 | 1 | 0 | 9 | 7 | 2 | 2 | 1 | 1 | 8 | 1 |    |          |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0        |
| ANIMAL ID                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0        |
| <b>75 MG/KG</b>                | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2  | 3        |
|                                | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9  | 0        |
|                                | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0  | * TOTALS |
| Adrenal Cortex                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| Degeneration, Cystic           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2.25     |
| Hyperplasia                    | 2 | 2 | 2 | 2 |   |   |   | 2 |   | 2 |   | 2 |   | 2 |   | 2 |   | 2 |   | 2 |   | 2 |   | 2 |    | 17.21    |
| Hypertrophy                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 3.20     |
| Necrosis                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2.20     |
| Adrenal Medulla                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |          |
| Hyperplasia                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 6.20     |
| Islets, Pancreatic             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |          |
| Parathyroid Gland              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 44 |          |
| Pituitary Gland                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |          |
| Pars Distalis, Angiectasis     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2.25     |
| Pars Distalis, Hyperplasia     | 3 | 3 | 2 | 3 | 2 |   |   | 2 | 2 |   | 2 |   | 2 |   | 2 |   | 2 |   | 3 |   |   |   |   |   |    | 21.24    |
| Thyroid Gland                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 46 |          |
| C-cell, Hyperplasia            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 4.20     |
| Follicular Cell, Hyperplasia   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2.30     |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |       |
| Hyperplasia    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 5.1.8 |

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 3 | 6 | 7 | 7 | 7 | 7 | 7 |   |
|                                | 3 | 3 | 3 | 3 | 7 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 8 | 9 | 3 | 3 | 3 | 0 | 3 |
|                                | 0 | 0 | 2 | 1 | 6 | 1 | 1 | 9 | 1 | 2 | 2 | 0 | 2 | 2 | 1 | 0 | 9 | 7 | 2 | 2 | 1 | 1 | 8 | 1 |   |
| <hr/>                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>75 MG/KG</b>                | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
|                                | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
|                                | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <hr/>                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>* TOTALS</b>                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

Inflammation, Chronic Active 1 1.0

|            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Ovary Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |       |
|            | 3 |   |   |   |   |   |   | 3 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 6 3.0 |
| Uterus     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |       |

---

**HEMATOPOIETIC SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Bone Marrow Hyperplasia, Reticulum Cell | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |       |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 1.0 |
| Lymph Node Deep Cervical, Ectasia       |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |   |   |   |   |    | 3     |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 3.0 |
| Lymph Node, Mandibular                  | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0  |       |
| Lymph Node, Mesenteric                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |       |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 1.0 |
| Spleen Hematopoietic Cell Proliferation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |       |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 3.0 |
| Thymus                                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | +  | 47    |

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**INTEGUMENTARY SYSTEM**

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked





TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

## Lab: BNW

## ALIMENTARY SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 5 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 5 | 7 | 5 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 |   |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 2 | 3 | 3 | 3 | 6 | 1 | 3 | 0 | 7 | 3 | 6 | 3 | 4 | 0 | 3 | 7 | 3 | 3 | 3 | 8 | 3 | 6 | 3 | 3 | 3 | 3 |
|                                | 9 | 1 | 2 | 0 | 9 | 6 | 1 | 7 | 6 | 0 | 4 | 0 | 7 | 8 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 |   |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| ANIMAL ID                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| <b>150 MG/KG</b>               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |   |
|                                | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |
|                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |   |

females  
(cont...)

|                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mesentery             | + | + | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Fat, Necrosis         | 2 | 3 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas              | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Acinus, Atrophy       | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salivary Glands       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Stomach, Forestomach  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Hyperplasia, Squamous | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ulcer                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| Stomach, Glandular    | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Mineralization        | 1 | 1 | 1 | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Tongue                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**CARDIOVASCULAR SYSTEM**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Cardiomyopathy | 1 | 1 | 1 | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

**ENDOCRINE SYSTEM**

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex       | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Degeneration, Cystic | 1 | 1 | 1 | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 5 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 5 | 7 | 5 | 7 | 5 | 6 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 |   |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 2 | 3 | 3 | 3 | 6 | 1 | 3 | 0 | 7 | 3 | 6 | 3 | 4 | 0 | 3 | 7 | 3 | 3 | 3 | 8 | 3 | 6 | 3 | 3 | 3 | 3 |
|                                | 9 | 1 | 2 | 0 | 9 | 6 | 1 | 7 | 6 | 0 | 4 | 0 | 7 | 8 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 1 |   |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| ANIMAL ID                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| <b>150 MG/KG</b>               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |   |
|                                | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |
|                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |   |

females  
(cont...)

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hyperplasia                | 2 | 2 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Hypertrophy                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Necrosis                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adrenal Medulla            | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia                |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Islets, Pancreatic         | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland            | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Angiectasis |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |
| Pars Distalis, Hyperplasia |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   | 3 |   |   |   |   |   |   |
| Thyroid Gland              | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Hyperplasia        |   |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   | 3 |   |   |   |   |   |   |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

Clitoral Gland

Hyperplasia

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

|       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked







TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

Date Report Registered: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

# ALIMENTARY SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 92

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild      4) Marked



TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route:** GAVAGE

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

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**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |   |   |    |   |     |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|----|---|-----|
| Clitoral Gland Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | + | + | + | +  | + | + | + | 49 | 5 | 2.0 |
| Ovary                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | 49 |   |   |   |    |   |     |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Page 94

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

1) Minimal 3) Moderate  
2) Mild 4) Marked





TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 6 | 3 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 1 | 3 | 3 |
|                                | 2 | 2 | 1 | 2 | 0 | 9 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 1 | 2 | 1 | 0 | 1 | 2 | 9 | 1 | 4 | 0 | 2 |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>150 MG/KG</b>               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                                | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
|                                | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

**\* TOTALS**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|
| Hyaline Droplet                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Olfactory Epithelium, Degeneration               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Olfactory Epithelium, Metaplasia,<br>Respiratory |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Respiratory Epithelium, Accumulation,            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Hyaline Droplet                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Respiratory Epithelium, Hyperplasia              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Trachea  | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | A | + | + | 48 |  |

**SPECIAL SENSES SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--|
| Eye             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |  |
| Cataract        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Retina, Atrophy |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |  |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | 47 |  |

**URINARY SYSTEM**

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |        |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
| Kidney                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | 47 |        |
| Nephropathy                          | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2  | 40 1.2 |
| Transitional Epithelium, Hyperplasia |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 3.0  |
| Urinary Bladder                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | 48 |        |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 0 | 6 | 7 | 7 | 0 | 6 | 7 | 7 | 6 | 7 | 4 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 5 |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 2 | 0 | 3 | 3 | 2 | 9 | 3 | 3 | 5 | 3 | 9 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 3 | 3 | 4 |
|                                | 4 | 6 | 2 | 1 | 3 | 5 | 2 | 0 | 2 | 1 | 1 | 6 | 0 | 0 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 9 | 1 | 2 |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>ANIMAL ID</b>               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>300 MG/KG</b>               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                                | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |
|                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |

females  
(cont...)

## ALIMENTARY SYSTEM

Esophagus

+ +

Intestine Large, Cecum

+ A + + + + + + + + + A + + + + + + + + + + + A + + + +

Intestine Large, Colon

+ + + + + + + + + + + A + + + + + + + + + + + + + + + + + +

Intestine Large, Rectum  
Parasite Metazoan

+ + + + + + + + + + + A + + + + + + + + + + + + + + + + + + X

Intestine Small, Duodenum

+ + + + + + + + + + + A + + + + + + + + + + + + + + + + + +

Intestine Small, Ileum

+ A + + + + + + + + + A + + + + + + + + + + + + + + + + + +

Intestine Small, Jejunum

+ A + + + + + + + + + A + + + + + + + + + + + + + + + + + +

Liver

+ +

Angiectasis

X X

Basophilic Focus

X X

Clear Cell Focus

X X

Eosinophilic Focus

X X

Hepatodiaphragmatic Nodule

X X

Mixed Cell Focus

X X

Bile Duct, Hyperplasia

X X

Hepatocyte, Mitotic Alteration

X X

X X

1

2

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

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Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 0 | 6 | 7 | 7 | 0 | 6 | 7 | 7 | 6 | 7 | 4 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 5 |  |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
|                                | 2 | 0 | 3 | 3 | 2 | 9 | 3 | 3 | 5 | 3 | 9 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 3 | 3 | 4 |  |
|                                | 4 | 6 | 2 | 1 | 3 | 5 | 2 | 0 | 2 | 1 | 1 | 6 | 0 | 0 | 3 | 2 | 2 | 2 | 2 | 2 | 9 | 1 | 2 | 7 |  |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| <b>ANIMAL ID</b>               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| <b>300 MG/KG</b>               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |  |
|                                | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |  |
|                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |  |
|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Mesentery                      |   | + |   |   |   | + |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   | + |   |  |
| Fat, Necrosis                  |   |   | 2 |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   | 2 |   |  |
| Oral Mucosa                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |   |  |
| Pancreas                       |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Acinus, Atrophy                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Acinus, Hyperplasia            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Salivary Glands                |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Stomach, Forestomach           |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Hyperplasia, Squamous          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Inflammation                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Ulcer                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Stomach, Glandular             |   | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Atrophy                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Mineralization                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2 |   |   |   |   |   |  |

**CARDIOVASCULAR SYSTEM**

|  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel                             |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |   |   |   |   |
| Heart                                    |  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Cardiomyopathy                           |  |   | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 2 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Pericardium, Inflammation, Granulomatous |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pericardium, Inflammation, Acute         |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S

**Date Report Requested:** 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST | 0 | 6 | 7 | 7 | 0 | 6 | 7 | 7 | 7 | 6 | 7 | 4 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 5 |   |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 2 | 0 | 3 | 3 | 2 | 9 | 3 | 3 | 3 | 5 | 3 | 9 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 0 | 1 | 3 | 3 | 4 |
|             | 4 | 6 | 2 | 1 | 3 | 5 | 2 | 0 | 2 | 1 | 1 | 6 | 0 | 0 | 3 | 2 | 2 | 2 | 2 | 2 | 9 | 1 | 2 | 7 |

.....

| FISCHER 344 RATS FEMALE | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 300 MG/KG               |           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                         | 3         | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                         | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |
|                         | 1         | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |

## **ENDOCRINE SYSTEM**

|                            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Adrenal Cortex             | +     | A     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |
| Degeneration, Cystic       |       |       |       |       | 3     |       | 2     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Hyperplasia                |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 2     |       |       | 2     | 2     | 2     | 2     | 2     |
| Hypertrophy                |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Vacuolization Cytoplasmic  |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 4     |       |       |       |       |       |       |       |
| .....                      | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Adrenal Medulla            | +     | A     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |
| Hyperplasia                |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 2     |       |       |       |       |       |       |       |
| .....                      | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Islets, Pancreatic         | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |
| .....                      | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Parathyroid Gland          | +     | +     | M     | M     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | M     | M     | +     | +     | +     | M     | +     |       |
| .....                      | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2     |       |       |       |       |       |       |       |
| Pituitary Gland            | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |
| Pars Distalis, Angiectasis |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Pars Distalis, Hyperplasia |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 3     |       |       | 3     | 2     |       | 2     | 3     |
| .....                      | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2     |       |       | 3     | 1     |       | 3     |       |
| Thyroid Gland              | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |       |
| C-cell, Hyperplasia        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 2     | 2     |       |

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

**BLANK .. Not examined**

#### 1-4 .. Lesion qualified a

1) Minimal 3) Moderate

2) Mild      4) Marked





TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 2 | 0 | 3 | 3 | 2 | 9 | 3 | 3 | 3 | 5 | 3 | 9 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 0 | 1 | 3 | 3 | 4 |
|                                | 4 | 6 | 2 | 1 | 3 | 5 | 2 | 0 | 2 | 1 | 1 | 6 | 0 | 0 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 9 | 1 | 2 | 7 |
| <hr/>                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>FISCHER 344 RATS FEMALE</b> | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>ANIMAL ID</b>               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>300 MG/KG</b>               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                                | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |
|                                | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

females  
(cont...)

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Cyst   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Inflammation, Acute                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Inflammation, Chronic Active                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Alveolar Epithelium, Hyperplasia                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Alveolus, Infiltration Cellular, Histiocyte            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Bronchiole, Hyperplasia                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| <hr/>  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Nose   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Inflammation, Suppurative                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Inflammation, Chronic                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Glands, Dilatation                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Glands, Hyperplasia                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Olfactory Epithelium, Accumulation,<br>Hyaline Droplet | 1 | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 |   | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 2 |   |   |  |
| Olfactory Epithelium, Atrophy                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Olfactory Epithelium, Metaplasia,<br>Respiratory       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Olfactory Epithelium, Metaplasia,<br>Squamous          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Respiratory Epithelium, Hyperplasia                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Respiratory Epithelium, Metaplasia,<br>Squamous        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| <hr/>  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Pleura   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Inflammation, Suppurative                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Trachea  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Inflammation, Suppurative                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

**SPECIAL SENSES SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

l .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

**Test Type:** CHRONIC

## **Route: GAVAGE**

**Species/Strain:** RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOFUGENOL

CAS Number: 97-54-1

**Pathologist:** Blackshear, P. - GRUMBEIN, S.

Date Report Requested: 09/28/2006

Time Report Requested: 17:46:24

**First Dose M/F:** 04/22/02 / 04/23/02

Lab: BNW

Ear

Eye  
Retina, Atrophy

## Harderian Gland

## **URINARY SYSTEM**

Kidney  
Infarct  
Inflammation, Suppurative  
Nephropathy  
Transitional Epithelium, Hyperplasia

Urinary Bladder  
Inflammation, Chronic Active

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

TDMS No. 88105 - 03

Test Type: CHRONIC

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|                                |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 6               | 7 | 7 | 7 | 5 | 7 | 7 | 3 | 7 | 6 | 7 | 7 | 0 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 4 |   |
|                                | 2               | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 7 |   |
|                                | 7               | 2 | 1 | 1 | 7 | 1 | 2 | 6 | 0 | 0 | 2 | 2 | 8 | 0 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 2 | 1 | 9 |
| <hr/>                          |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>FISCHER 344 RATS FEMALE</b> | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                      | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>300 MG/KG</b>               | 3               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 |
|                                | 7               | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
|                                | 6               | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|                                | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**ALIMENTARY SYSTEM**

|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |       |
|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|-------|
| Esophagus                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |       |       |
| Intestine Large, Cecum         | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 44 |       |       |
| Intestine Large, Colon         | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 48 |       |       |
| Intestine Large, Rectum        | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 48 |       |       |
| Parasite Metazoan              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |    | 2     |       |
| Intestine Small, Duodenum      | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 48 |       |       |
| Intestine Small, Ileum         | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 45 |       |       |
| Intestine Small, Jejunum       | + | + | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 46 |       |       |
| Liver                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |       |       |
| Angiectasis                    |   |   |   |   |   | 2 | 2 |   |   |   |   |   |   | 3 |   |   |   |   |   |   |   |   |   |   |    | 3 2.3 |       |
| Basophilic Focus               | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | 46 |       |       |
| Clear Cell Focus               |   |   |   |   |   | X |   |   |   | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | 10 |       |       |
| Eosinophilic Focus             | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 5     |       |
| Hepatodiaphragmatic Nodule     |   |   |   |   |   |   |   |   |   | X |   | X | X |   |   |   |   |   |   |   |   |   |   |   |    | 4     |       |
| Mixed Cell Focus               |   |   |   |   |   |   |   |   |   | X |   | X | X |   |   |   |   |   |   |   |   |   |   |   |    | 3     |       |
| Bile Duct, Hyperplasia         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       | 4 1.5 |
| Hepatocyte, Mitotic Alteration |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       | 1 3.0 |
|                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |       |       |

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST                    | 6               | 7 | 7 | 7 | 5 | 7 | 7 | 3 | 7 | 6 | 7 | 7 | 0 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 4  |        |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
|                                | 2               | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4  | 7      |
|                                | 7               | 2 | 1 | 1 | 7 | 1 | 2 | 6 | 0 | 0 | 2 | 2 | 8 | 0 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 2 | 1  | 9      |
| <b>FISCHER 344 RATS FEMALE</b> | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |        |
| ANIMAL ID                      | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |        |
| <b>300 MG/KG</b>               | 3               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4  |        |
|                                | 7               | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0  |        |
|                                | 6               | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9  |        |
|                                | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |        |
| Mesentery                      | +               | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 14     |
| Fat, Necrosis                  | 2               | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 13 2.0 |
| Oral Mucosa                    |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1      |
| Pancreas                       | +               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |        |
| Acinus, Atrophy                |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 4 1.3  |
| Acinus, Hyperplasia            |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 5 2.6  |
| Salivary Glands                | +               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |        |
| Stomach, Forestomach           | +               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |        |
| Hyperplasia, Squamous          |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2 2.0  |
| Inflammation                   |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 2.0  |
| Ulcer                          |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2 1.5  |
| Stomach, Glandular             | +               | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | 47 |        |
| Atrophy                        | 2               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 3 2.0  |
| Mineralization                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 2.0  |

**CARDIOVASCULAR SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |        |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
| Blood Vessel                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1      |
| Heart                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |        |
| Cardiomyopathy                           | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 39 1.2 |
| Pericardium, Inflammation, Granulomatous |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 4.0  |
| Pericardium, Inflammation, Acute         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2 1.20 |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

|                                |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 6               | 7 | 7 | 7 | 5 | 7 | 7 | 3 | 7 | 6 | 7 | 7 | 0 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 4 |   |
|                                | 2               | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 7 |   |
|                                | 7               | 2 | 1 | 1 | 7 | 1 | 2 | 6 | 0 | 0 | 2 | 2 | 8 | 0 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 2 | 1 | 9 |
| <hr/>                          |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>FISCHER 344 RATS FEMALE</b> | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                      | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>300 MG/KG</b>               | 3               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 |
|                                | 7               | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
|                                | 6               | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|                                | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## ENDOCRINE SYSTEM

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        |        |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|
| Adrenal Cortex             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49     |        |
| Degeneration, Cystic       |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 3 2.3  |
| Hyperplasia                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 18 2.0 |
| Hypertrophy                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 2 2.0  |
| Vacuolization Cytoplasmic  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 1 4.0  |
| Adrenal Medulla            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49     |        |
| Hyperplasia                |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |        | 5 1.8  |
| Islets, Pancreatic         | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 49     |        |
| Parathyroid Gland          | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44     |        |
| Pituitary Gland            | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 49     |        |
| Pars Distalis, Angiectasis |   |   |   |   |   | 2 |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   | 3 2.0  |        |
| Pars Distalis, Hyperplasia |   |   |   |   |   | 4 |   |   |   |   |   |   | 3 |   |   |   |   |   |   |   |   |   |   |   | 20 2.5 |        |
| Thyroid Gland              | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 48     |        |
| C-cell, Hyperplasia        |   |   |   |   |   | 2 |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   | 6 2.2  |        |

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

|                                |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                | 6               | 7 | 7 | 7 | 5 | 7 | 7 | 3 | 7 | 6 | 7 | 7 | 0 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 4 |   |
|                                | 2               | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 7 |   |
|                                | 7               | 2 | 1 | 1 | 7 | 1 | 2 | 6 | 0 | 0 | 2 | 2 | 8 | 0 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 2 | 1 | 9 |
| <hr/>                          |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>FISCHER 344 RATS FEMALE</b> | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                      | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>300 MG/KG</b>               | 3               | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 |
|                                | 7               | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
|                                | 6               | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|                                | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

|                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |              |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------------|
| Clitoral Gland               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |              |
| Hyperplasia                  | 2 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>4 1.8</b> |
| Inflammation, Chronic Active |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>1 3.0</b> |
| <hr/>                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |              |
| Ovary                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |              |
| Cyst                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>4 3.0</b> |
| Oviduct                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | <b>1</b>     |
| Uterus                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |              |

**HEMATOPOIETIC SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |           |              |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|-----------|--------------|
| Bone Marrow                      | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | +        | <b>49</b> |              |
| Lymph Node                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |           | <b>3</b>     |
| Deep Cervical, Ectasia           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |           | <b>1 3.0</b> |
| Deep Cervical, Hemorrhage        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |           | <b>1 2.0</b> |
| Lymph Node, Mandibular           | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | <b>0</b> |           |              |
| Lymph Node, Mesenteric           | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | +        | <b>49</b> |              |
| Spleen                           | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | +        | <b>49</b> |              |
| Hematopoietic Cell Proliferation |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |           | <b>3 3.0</b> |
| Inflammation, Granulomatous      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |           | <b>1 4.0</b> |

\* ... Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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TDMS No. 88105 - 03

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

## P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

ISOEUGENOL

CAS Number: 97-54-1

Pathologist: Blackshear, P. - GRUMBEIN, S.

Date Report Reqstd: 09/28/2006

Time Report Reqstd: 17:46:24

First Dose M/F: 04/22/02 / 04/23/02

Lab: BNW

| DAY ON TEST   | 6 | 7 | 7 | 7 | 5 | 7 | 7 | 3 | 7 | 6 | 7 | 7 | 0 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 4               |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|
|   | 2 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4               | 7 |
|   | 7 | 2 | 1 | 1 | 7 | 1 | 2 | 6 | 0 | 0 | 2 | 2 | 8 | 0 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 2 | 2 | 1               | 9 |
| <b>FISCHER 344 RATS FEMALE</b>                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |   |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |   |
| <b>300 MG/KG</b>                                    | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4               |   |
|   | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0               |   |
|   | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |
| Cyst  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 4.0</b>    |   |
| Inflammation, Acute                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>3 1.7</b>    |   |
| Inflammation, Chronic Active                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>2 1.5</b>    |   |
| Alveolar Epithelium, Hyperplasia                    | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>14 1.0</b>   |   |
| Alveolus, Infiltration Cellular, Histiocyte         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 3.0</b>    |   |
| Bronchiole, Hyperplasia                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 1.0</b>    |   |
| Nose  | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | <b>49</b>       |   |
| Inflammation, Suppurative                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>3 1.3</b>    |   |
| Inflammation, Chronic                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>2 2.0</b>    |   |
| Glands, Dilatation                                  |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>2 2.0</b>    |   |
| Glands, Hyperplasia                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 2.0</b>    |   |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | 1 |   | 1 | 1 | 1 | 2 |   | 2 | 1 |   |   |   |   | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | <b>33 1.2</b>   |   |
| Olfactory Epithelium, Atrophy                       |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>4 1.0</b>    |   |
| Olfactory Epithelium, Metaplasia, Respiratory       |   | 1 |   |   |   |   |   | 1 |   |   |   |   |   |   | 1 |   |   | 1 | 2 |   |   |   |   | <b>12 1.3</b>   |   |
| Olfactory Epithelium, Metaplasia, Squamous          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 2.0</b>    |   |
| Respiratory Epithelium, Hyperplasia                 |   |   |   |   |   |   | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>6 2.0</b>    |   |
| Respiratory Epithelium, Metaplasia, Squamous        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>2 1.5</b>    |   |
| Pleura  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>+ 1</b>      |   |
| Inflammation, Suppurative                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>3 1 3.0</b>  |   |
| Trachea   | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | <b>49</b>       |   |
| Inflammation, Suppurative                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 2.0</b>    |   |

**SPECIAL SENSES SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

x .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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1) Minimal 3) Moderate

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